

Commodity Highlight: Rhubarb

Rhubarb is a widely known but narrowly used specialty crop in the United States. Introduced into the United States at the end of the 18th century, rhubarb (like other specialty vegetables), has flourished in backyard gardens throughout the northern parts of the country. Most consumers recognize this perennial cool-season crop for its longtime use as a key ingredient in strawberry-rhubarb pie. In fact, the close identification with this dessert spawned rhubarb's popular nickname, "pie plant". However, with consumers continually looking for new flavors and products, the unique tangy flavor of rhubarb may be finding new favor among chefs and other culinary leaders. In addition to the traditional use in pies, rhubarb has served as a zesty sidedish for meats and seafood, as a salad ingredient, and in recipes for sauces, tarts, preserves, jams, and soups.

According to *The Rhubarb Compendium*, there are many species of rhubarb, including food, medicinal, and ornamental varieties 1/. Although the garden rhubarb (*Rheum rhabarbarum* L.) is used like a fruit in various recipes, botanically it is a vegetable. Rhubarb is a member of the buckwheat family (*Polygonaceae*), which also includes sorrel (an herb) and a variety of medicinal herbs. Rhubarb grown in the United States differs in size and appearance from Chinese rhubarb (*Rheum palmatum*), whose roots and rhizomes are favored for medicinal purposes (e.g., as a purgative and digestive aid).

The edible petioles (stalks) of garden rhubarb can be green, red, or pink, depending on variety. Although red varieties are more commonly produced today, yield per acre is generally greater for green varieties. The stalks of rhubarb are edible, but the inedible broad leaves contain a toxic substance (oxalic acid), which can cause life-threatening illness. Although rarely consumed without some preparation, rhubarb in all forms remains a good source of dietary fiber and vitamin C.

Production Is Concentrated

According to the 2002 Census of Agriculture (census), 467 farms harvested rhubarb from 1,809 acres (table 19). Although these farms were spread over 30 States, only Washington (824 acres), Michigan (144 acres), and Oregon (undisclosed but known

Table 19--U.S. rhubarb: Field-grown area harvested in selected States

Item	1987	1992	1997	2002	Change
					1997-2002
					Percent
			--Acres--		
Washington	259	361	697	824	18.2
Oregon	345	307	490	1/	--
Michigan	183	93	153	144	-5.9
Ohio	1/	4	9	45	400.0
New York	6	4	184	36	-80.4
Georgia	--	--	--	20	--
New Jersey	13	4	11	12	9.1
Wisconsin	7	11	18	9	-50.0
Others	94	77	150	719	--
United States	907	861	1,712	1,809	5.7

-- = not available or applicable. 1/ Not shown to avoid disclosure of individual farms.

Source: USDA, National Agricultural Statistics Service, *Census of Agriculture* (table 29).

1/ From *The Rhubarb Compendium*. August 2006.
<http://www.rhubarbinform.com>

Table 20--Oregon rhubarb: Area, yield, production, and value, 1980-2005

Year	Area harvested	Yield per acre	Production	Farm price	Crop value
	Acres	Cwt	1,000 cwt	\$/cwt	\$ 1,000
1980	250	170	43.17	9.61	415
1985	284	190	53.85	15.26	822
1990	324	220	67.20	16.29	1,095
1995	435	200	86.40	16.64	1,438
2000	510	100	52.60	19.03	995
2001	465	101	46.95	19.38	910
2002	438	120	52.64	20.93	1,102
2003	438	129	56.44	20.91	1,180
2004	403	149	59.90	20.90	1,252
2005	395	158	62.35	20.50	1,278

Note: Cwt = hundredweight, a unit of measure equal to 100 pounds.

Source: Oregon State University, OSU Extension Service, *OAIN Database*.

<http://oregonstate.edu/oain/Database/SignInDCS.asp>

to be 438 acres, see table 20) reported harvesting more than 100 acres of rhubarb. The farms in these three States account for close to 90 percent of all commercial rhubarb grown in the United States. Between 1997 and 2002, there was an increase in both the number of farms growing rhubarb (up 18 percent) and the National area harvested (up 6 percent). Rhubarb acreage is now twice as high as it was in 1987 (table 19).

Oregon is the only State for which a consistent, noncensus annual time series is available for rhubarb (table 20). According to Oregon State University's Oregon Agricultural Information Network (OAIN) database, higher yields (up 6 percent to 7.9 short tons per acre), drove the State's rhubarb crop up 4 percent to 6.2 million pounds in 2005. The value of the State's rhubarb crop was \$1.3 million, 2 percent higher than a year earlier. Clackamas County accounted for three-fourths of the State's 395 acres of rhubarb in 2005.

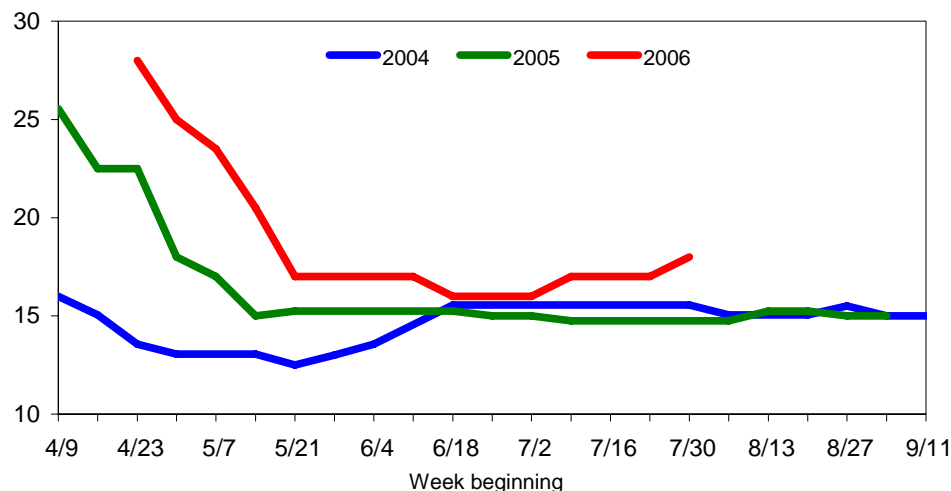
Fresh rhubarb is generally available from domestic sources throughout much of the year. The crop year for the bulk of field-grown rhubarb generally runs from April to September. However, according to the Market News Service, fresh product from Oregon and Washington has been available into November in wholesale markets during the past few years. After a brief respite in December, hothouse product becomes available from Washington and Michigan during January to April. Rhubarb (red varieties) grown under cover in sheds is produced from roots lifted from the field and planted in dark, warm beds to produce the smoother, milder, pinkish stems that characterize hothouse rhubarb.

According to the 2002 census, 59 percent of rhubarb area was harvested to be used for processed products. About 8 percent of all farms with rhubarb sold product for processing, with the remainder of farms concentrating on the fresh market, where prices are traditionally stronger. Four States, Washington, Oregon, Michigan, and Ohio, harvested product for processing in 2002, with Washington (53 percent of processing acreage) and Oregon (34 percent) accounting for the bulk of area for processing.

Figure 11

U.S. fresh-market rhubarb, all: Weekly f.o.b. shipping-point prices

\$/20-lb carton



Source: USDA, Agricultural Marketing Service, Market News, FV Data Portal.

Because yields for processing are generally greater than for the fresh market (due to culling of lower-grade product unacceptable to many quality-conscious fresh-market consumers), the share of volume that moves to processors is likely higher than the 59 percent of area indicated by the census. According to industry sources, about three-fourths of U.S. rhubarb is processed, with most of that used for freezing. A small amount of rhubarb is also canned or dehydrated (freeze-dried). Most rhubarb that is frozen is packed for commercial and institutional use, with smaller volumes packed for retail (supermarket) sale.

F.o.b. shipping-point prices for rhubarb are routinely reported by USDA's Market News Service. On average, data from Oregon suggests that rhubarb grower prices have remained relatively flat over the past several years. However, according to Market News data, in 2006, weekly prices for fresh-market rhubarb have consistently averaged above those of the past 2 years (figure 11). This may reflect both the impact of weather on yields and stronger demand resulting from efforts by the industry to promote the product.

Thin Data Leaves Use Trends Uncertain

Like most other specialty crops with limited acreage, aside from the census and data reported for Oregon—the second-leading producing State—little acreage, yield, or production data exist for rhubarb. Additionally, because the U.S. trade data provided by the Census Bureau does not contain a code specifically for rhubarb, official estimates of foreign trade are also lacking. Because of these limited data, ERS estimates of supply and use of this crop are approximations, based largely on interpolated census acreage, yields reported in Oregon (as a proxy national yield), and approximated foreign trade. Exports of fresh rhubarb to Canada, by far the leading foreign market for most U.S. vegetables, have been available via Canadian import data. Some rhubarb is known to be imported, since Market News data specifically indicates imports of fresh rhubarb from the Netherlands (likely hothouse-produced, based on the period of entry), while past Animal and Plant

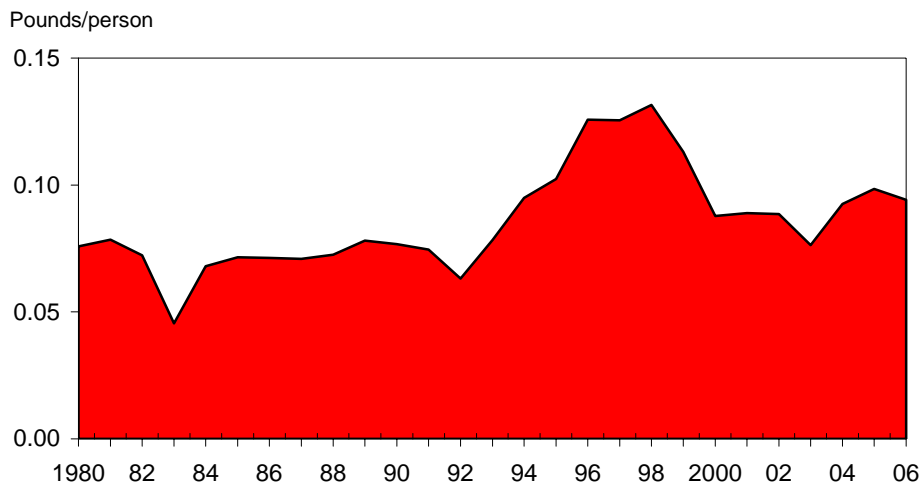
Health Inspection Service (APHIS) data have shown sporadic imports of fresh and frozen product from other nations.

Cobbling together these sources yields a brief picture of trends in the rhubarb industry over the past decade. The increasing acreage indicated by the census has helped rhubarb production to creep up over the past decade. This larger acreage apparently offset lower yields, which may have resulted from a continued shift toward the more colorful but lower-yielding red varieties.

Despite the small increase in supply, increasing population has outweighed gains in supply, resulting in a slow erosion of per capita disappearance since the most recent peak in the late 1990's (figure 12). There appears to have been a surge in rhubarb demand during the second half of the 1990s, which was apparently not maintained into the 2000s. Per capita use at the start and end of this surge in the late 1990s was relatively unchanged. On a fresh-weight basis, disappearance of rhubarb for all uses averaged 0.09 pound per person during 2003-05—unchanged from 1993-95, but above the 0.07 pound estimated for 1983-85. Based on the current data, future trends are unclear for the rhubarb industry. However, continuing to broaden the scope of rhubarb markets, while searching for new uses, appears to be the key.

Figure 12

U.S. rhubarb, all uses: Per capita disappearance, 1980-2006



Source: Estimated and prepared by USDA, Economic Research Service.